OIL ANALYSIS REPORT

DON ANDERSON GEOFF/502758 VOLVO PENTA A218911 - STARBOARD DIESEL ENGINE

Sample No: VPA050932

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

	1011			
SAMPLE INFORMAT	ION			
Sample Number		VPA050932	VPA048343	
Sample Date		19 Mar 2024	22 Mar 2022	
Machine Hours		1379	1314	
Oil Hours		0	0	
Oil Changed		Changed	Changed	
Sample Status		NORMAL	NORMAL	
OIL CONDITION				
Visc @ 100°C	cSt	13.4	13.5	
Base Number (BN)	mg KOH/g	9.5	9.9	
Oxidation (PA)	%	58	61	
CONTAMINATION				
Water	%	NEG	NEG	
Soot %	%	0.3	0.4	
Nitration (PA)	%	53	71	
Sulfation (PA)	%	52	54	
Glycol	%	NEG	NEG	
Fuel	%	<1.0	<1.0	
Silicon	ppm	7	2	
Sodium	ppm	1	1	
Potassium	ppm	1	□ <1	
		_	_	
WEAR METALS				
Iron	ppm	27	33	
Copper	ppm	□7	13	
Lead	ppm	2	2	
Tin	ppm	□ <1	<1	
Aluminum	ppm	2	1	
Chromium	ppm	2	2	
Molybdenum	ppm	63	62	
Nickel	ppm	4	4	
Titanium	ppm	<1	 <1	
Silver	ppm		0	
Manganese	ppm	□<1	□ <1	
Vanadium	ppm	<1	0	
ADDITIVES				
		- 1005		
Calcium	ppm	■1085 ■ 001	1140	
Magnesium	ppm	961	1020	
Zinc	ppm	■ 1184	1291	
Phosphorus	ppm	1009	1063	
Barium	ppm	0	0	
Boron	ppm	2	 <1	

Endor Marine LLC - Coastal Marine - 152124 4300 11th Ave. NW SEATTLE, WA US 98107 Contact: WILLOW YANARELLA service@coastalmarineengine.com T: (206)784-3703 F: (206)784-8823

Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

 Depot:
 VP794951

 Unique No:
 10951180

 Signed:
 Don Baldridge

 Report Date:
 02 Apr 2024

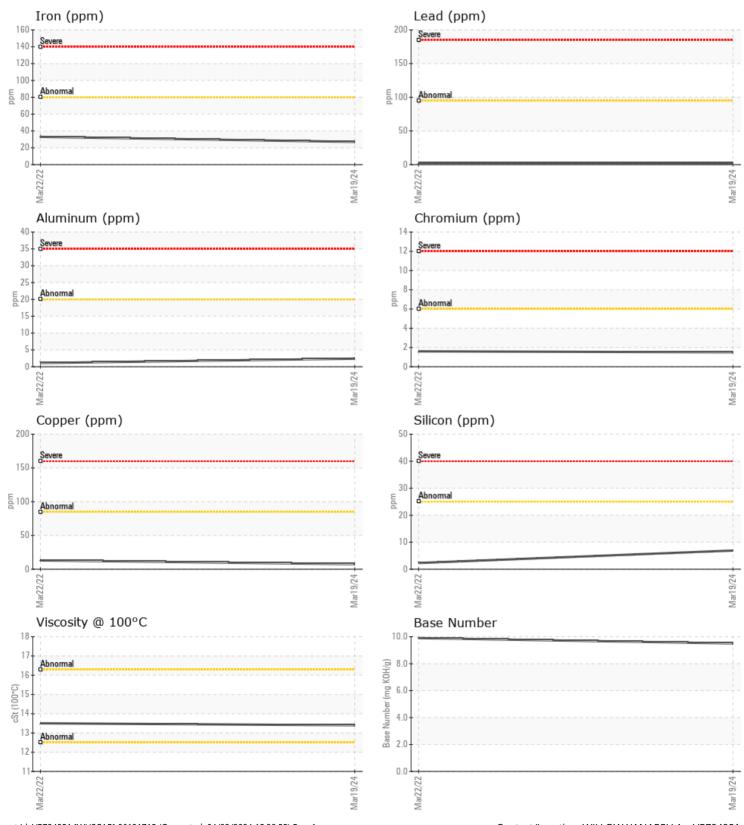
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GRAPHS



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